

CLAIMS

What is claimed is:

1. A vascular graft device comprising:
 - a semipermeable inner wall surrounding a passage;
 - 5 a nonpermeable outer wall surrounding the inner wall; and
 - a biological agent disposed between the inner and outer walls for release through the inner wall.
2. The graft device of Claim 1 in which the biological agent comprises a time release drug.
- 10 3. The graft device of Claim 2 in which the time release drug is for preventing occlusion.
4. The graft device of Claim 2 in which the biological agent comprises microencapsulated drugs within a gelatinous media.
5. The graft device of Claim 1 in which the biological agent comprises cells.
- 15 6. The graft device of Claim 5 in which the graft device functions as an artificial organ.
7. The graft device of Claim 1 in which the outer wall is sealed to the inner wall at first and second ends of the graft device.
8. The graft device of Claim 7 in which the graft device is generally tubular in
20 shape.

9. The graft device of Claim 8 in which the outer wall comprises PTFE.
10. The graft device of Claim 8 in which the graft device is capable of being sutured to at least one blood vessel at the first and second ends.
11. The graft device of Claim 10 in which the biological agent is positioned at least
5 near the first and second ends of the graft device.
12. The graft device of Claim 8 further comprising a tubular inner graft member positioned within the passage of the vascular graft device, the inner graft member having first and second ends for suturing to at least one blood vessel.
13. The graft device of Claim 1 further comprising a conduit extending from the
10 graft device for replenishing the biological agent.
14. A vascular graft device comprising:
 - a semipermeable inner wall surrounding a passage;
 - a nonpermeable outer wall surrounding the inner wall and sealed to the inner wall at first and second ends of the graft device such that the graft device is
15 generally tubular in shape; and
 - a biological agent disposed between the inner and outer walls at least near the first and second ends for release through the inner wall.
15. A vascular device comprising:
 - an inner wall surrounding a passage;
 - 20 an outer wall surrounding the inner wall with a gap therebetween; and
 - a biological agent disposed between the inner and outer walls capable of being released.

16. A method of forming a vascular graft device comprising:
providing a semipermeable inner wall surrounding a passage;
surrounding the inner wall with a nonpermeable outer wall; and
disposing a biological agent between the inner and outer walls for release
5 through the inner wall.
17. The method of Claim 16 further comprising providing a time release drug as the biological agent.
18. The method of Claim 16 further comprising providing microencapsulated drugs within a gelatinous media as the biological agent.
- 10 19. The method of Claim 16 further comprising providing cells as the biological agent.
20. The method of Claim 16 further comprising sealing the outer wall to the inner wall at first and second ends of the graft device.
- 15 21. The method of Claim 20 further comprising forming the graft device to be generally tubular in shape.
22. The method of Claim 21 further comprising forming the outer wall from PTFE.
23. The method of Claim 2 further comprising positioning the biological agent at least near the first and second ends of the graft device.
- 20 24. The method of Claim 21 further comprising positioning a tubular inner graft member within the passage of the vascular graft device, the inner graft member having first and second ends for suturing to at least one blood vessel.

25. The method of Claim 16 further comprising extending a conduit from the graft device for replenishing the biological agent.
26. A method of limiting occlusion in a vascular graft device comprising:
- 5 providing the vascular graft device with a semipermeable inner wall surrounding a passage;
- surrounding the inner wall with a nonpermeable outer wall;
- disposing a biological agent between the inner and outer walls for time release through the inner wall, the time release of the biological agent for limiting occlusion over a period of time.